

## AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

### LISTING OF CLAIMS

1. (currently amended) A method of storing hydrogen comprising: contacting gaseous hydrogen with an imide represented by  $M^c(NH)^{-2}_{c/2}$ , where M represents a cationic species of at least one of: Li, Mg, Na, B, Al, Be, Zn, and mixtures thereof and c represents an average valence state of M, wherein said imide ~~having one or more cations other than hydrogen, said one or more cations forming forms~~ at least two distinct compounds different from said imide upon reaction with hydrogen.

2. (original) The method of Claim 1 wherein said at least two distinct compounds comprise an amide and a hydride.

3. (cancelled).

4. (original) The method of Claim 1 wherein said at least two distinct compounds comprise a first compound represented by  $MI^d(NH_2)_d^{-1}$  (amide) and a second compound represented  $MII^fH_f$  (hydride), where MI and MII respectively represent cationic species or a mixture of cationic species other than hydrogen, and d represents an average valence state of MI and f represents an average valence state MII.

5. (original) The method of Claim 1 wherein said imide is lithium imide represented by  $\text{Li}_2\text{NH}$  and said distinct compounds comprise a first compound represented by  $\text{LiNH}_2$ , and a second compound represented by  $\text{LiH}$ .

6. (currently amended) The method of Claim 1~~[[3]]~~ wherein M comprises an element selected from the group consisting of ~~Ba, Ca, Eu, La~~, Li, Mg, Na, Be, ~~Sr, Th~~ and mixtures thereof.

7. (original) The method of Claim 2 wherein said imide is represented by the formula  $\text{MgNH}$ , said amide is represented by the formula  $\text{Mg}(\text{NH}_2)_2$  and said hydride is represented by the formula  $\text{MgH}_2$ .

8. (original) The method of Claim 4 wherein said M, MI and MII are each elements independently selected.

9. (cancelled).

10. (cancelled).

11. (currently amended) The method of Claim 8 wherein at least one of said ~~[[M,]] MI and MII are each elements~~ comprises said cationic species selected as M and further MI and MII optionally comprise an additional element independently selected

from the group consisting of Ba, Ca, Eu, La, Li, Mg, Si, Sr, Th, Ti, Zr, and mixtures thereof.

12. (cancelled).

13. (currently amended) The method of Claim 8 wherein at least one of said ~~[[M,]] MI and MII are each elements~~ comprises said cationic species selected as M and further MI and MII optionally comprise an additional element independently selected from the group consisting of Al, Ba, Be, Ca, Ce, Cs, Eu, Ga, Gd, In, K, La, Li, Mg, Mn, Na, Nd, Pb, Rb, Si, Sm, Sn, Sr, Y, Yb, Zn, and mixtures thereof.

14. (currently amended) The method of Claim 8 wherein M, MI and MII are each elements independently selected from the group consisting of ~~Al, Be, B,~~ Mg, Li, Na, and mixtures thereof.

15-32. (cancelled)

33. (new) The method of Claim 1 wherein M is selected from the group consisting of Li, Be, Mg, Na, and mixtures thereof.

34. (new) The method of Claim 1 wherein M comprises Li.